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1c714 U.S. PTO
09/578371
05/25/00

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Key-Sun Choi et al.

Docket No.: 00-355

Serial No.:

Examiner :

Filed :

Art Unit :

For : METHOD FOR COMPARING SIMILARITY BETWEEN PHONETIC
TRANSCRIPTIONS OF FOREIGN WORD

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INFORMATION DISCLOSURE STATEMENT

Hon. Commissioner of Patents & Trademarks
United States Patent & Trademark Office
Washington, D.C. 20231

Dear Sir:

In accordance with the requirements of 37 CFR 1.97 and 1.98,
Applicants hereby submit the prior art listed hereinbelow, copies
enclosed.

- (1) An article entitled "RETRIEVAL EFFECTIVENESS OF PROPER
NAME SEARCH METHODS", By Ulrich Pfeifer et al., dated
May 6, 1996. This article discloses searching for
names, e.g. author names or company names which is
still an open problem. This paper reviews known
similarity measures. These measures deal with phonetic
similarity, typing errors and plain string similarity.

It is shown experimentally that all three approaches
lead to significantly higher retrieval quality than
plain identity. Further improvements are possible by
combining different methods; a probabilistic
interpretation of string similarity is developed that
leads to better results than an ad-hoc approach.

(2) An article entitled "PHONIX: THE ALGORITHM", By T. N. Gadd, Vol. 24, No. 4, October 1990, pgs. 363-366. This article discloses PHONIX which is a phonetic retrieval technique developed for use with the URICA library system. It has been successfully installed at a number of URICA sites in Southern Africa. PHONIX has been found to be particularly useful when applied to personal names, specifically author surnames in the context of a library system. Certain names such as Anton Chekov have been variously transliterated as TSJECHOF, TSJECHOW, TJEKHOW, CHEKHOV, CHEKHOW etc., in the multi-lingual environment of libraries in Southern Africa. PHONIX complements the more conventional information retrieval techniques used by URICA, and the algorithm used is explained as a simple, easy to apply, set of rules. This contribution follows on from a previous paper.

(3) An article entitled "PHONETIC STRING MATCHING: LESSONS FROM INFORMATION RETRIEVAL", By Justin Zobel et al. This article discloses phonetic matching used in applications such as name retrieval, where the spelling of a name is used to identify other strings that are

likely to be of similar pronunciation. In this paper we explain the parallels between information retrieval and phonetic matching, and describe our new phonetic matching techniques. Our experimental comparison with existing techniques such as Soundex and edit distances, which is based on recall and precision, demonstrates that the new techniques are superior. In addition, reasoning from the similarity of phonetic matching and information retrieval, we have applied combination of evidence to phonetic matching. Our experiments with combining demonstrate that it leads to substantial improvements in effectiveness.

The undersigned submits the above-identified references for independent consideration by the Examiner and does not make any admission that these references are or are not material to the present invention or that these references are or are not prior art with respect to the present invention.

I hereby certify that this correspondence is being deposited with the United States Postal Service as Express Mail in an envelope addressed to: Commissioner of Patents and Trademarks, Washington, D.C. 20231

on May 25, 2000

(Date of Deposit)
Rachel Pischner

Name and Reg. No. of Attorney
Rachel Pischner
Signature
May 25, 2000
Date of Signature

Respectfully submitted,

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